



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/582,840

06/14/2006

Gerhard Brueckner

4950

5013

21553 7590 06/01/2009
FASSE PATENT ATTORNEYS, P.A.
P.O. BOX 726
HAMPDEN, ME 04444-0726

EXAMINER

WIEHE, NATHANIEL EDWARD

ART UNIT

PAPER NUMBER

3745

MAIL DATE

DELIVERY MODE

06/01/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,840	Applicant(s) BRUECKNER ET AL.	
	Examiner NATHANIEL WIEHE	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 16-23 and 26-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 16-23 and 26-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1 and 32 have been considered but are moot in view of the new ground(s) of rejection. Upon further consideration the examiner no longer considers the previously indicated subject matter to be allowable. Any inconvenience to applicant or applicant's representative is deeply regretted.

Specifically, the use of Scalzo and Lynch's teachings in a slanted or tapered turbine section would product the claimed limitation of the guide pins extending at a slant to the radial and axial direction. Secondly the mounting device is not distinguishable over known bolt holders.

The previous objection to the drawings has been overcome by the cancellation of claims 24 and 25.

The previous objection to the specification has been overcome by applicant's amendment.

The previous rejection under 35 U.S.C. § 112 has been overcome by applicant's amendment.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Hartman (847,768).

Initially, the first 16 lines of the claim are being treated as intended use limitations. That is to say that the device only needs to be capable of being used in the specific turbine environment. Also, the only positively recited elements of the turbine structure are a housing, which is recited generically, and guide pins, which are construed as Hartman's bolts. Further, claim preamble language may not be treated as a limitation where it merely states an intended use of the system and is unnecessary to define the invention, the U.S. Court of Appeals for the Federal Circuit ruled May 8 (Catalina Marketing Int'l Inc. v. Coolsavings. com Inc., Fed. Cir., No. 01-1324, 5/8/02).

Hartman discloses a mounting device, i.e. bolt holder, that is formed by a plate-shaped base body (1,5,1) having two recesses, i.e. socket spaces housing the bolt heads, where the bolts reach therein and are then capable of being tightened from the opposite side by nuts. Hartman also discloses a hander (4^a) extending approximately perpendicularly from the base body. The bolt head pass into the recesses perpendicularly to the plane of the base body to be tightened and are brought out of engagement therewith tangentially to the plane of the base body, i.e. pulled upward as shown in Fig. 2. Also, the mounting device is positioned on the inside of the "housing", See Fig. 2, when the bolts are being tightened.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3745

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,16-21, and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scalzo (3,841,787). Scalzo discloses a gas turbine including a stator and rotor (16) comprising rotor blades (20). The stator includes a housing (14), stationary vanes (24) forming vane rings which boarder with radially outwardly positioned ends (34) on the housing and with radially inwardly positioned ends (32) on the rotor. The turbine includes guide pins (54) for each vane ring segment that pass through the housing (14) in a generally perpendicular manner with and having ends (55) engaging in fork shaped, i.e. slots (60), in the outer cover belt of the vane ring (See Fig. 4). The slots are at least partly open in the radial and axial directions. Scalzo also discloses seal carries (46) arranged between outer cover belts of neighboring guide vane rings (See Fig. 1) which cooperates with the radially outwardly positioned ends of the rotor blades (20). The guide pin (54) also cooperates with the seal carries (46) so that both the seal carries and the stator rings are properly aligned. Further, the pin of Scalzo and corresponding surfaces of the slot is machined flat (55) so as to prevent shiftability of the vane rings. Scalzo's guide pins are perpendicular to the casing wall, but not slanted relative to the turbomachine axis. However, it is well known in the art of turbomachinery that guide pin like elements that are utilized on slanted or tapered turbine sections are positioned so as to be slanted both radially and axially with respect to the turbine axis, as evidence by Imbourg et al. (7,234,920) and Crozet et al. (7,070,387) (note pin elements "28" in both), so as to be perpendicular to the casing

Art Unit: 3745

wall. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize slanted guide pins since such a modification is well known in the art when utilizing a tapered turbine section so that the guide pins are perpendicular to the casing wall.

Claims 1,16,17,19-23 and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch et al. (3,365,173), hereinafter "Lynch". Lynch discloses a jet engine, i.e. gas turbine, including a rotor (16) with blades and a stator with a housing (18) and stationary vanes (22) forming guide vane rings (20). The radially outward ends of the guide vane rings border the housing (18), while the radially inward ends (26) border the rotor. Lynch also includes a guide pin (54) extending generally perpendicularly through the housing (18) and engaging with a fork-shaped element, i.e. slot (52), in the outer cover belt (42) of the guide vane ring. The slot is partly open in the axial and radial directions. Lynch also discloses seal carries (38) arranged between the radially outwardly positioned ends of neighboring guide vane rings. The seal carries cooperate with the radially outwardly positioned ends of the rotor blades. Lynch's guide vane ring cover belt (42) includes two recesses (52,64) whereby the guide pin engages the first recess (42) and projections (66) of the seal carries engage the second recess (64). The two recesses are positioned next to each other in the circumferential direction. Thereby, the guide pin (54) acts to center both the guide vane rings and the seal carriers. Further, the shape of the slot (42) constitutes an axial stop limiting the shiftability of the guide vane rings. Lynch's guide pins are perpendicular to the casing wall, but not slanted relative to the turbomachine axis. However, it is well known in the

Art Unit: 3745

art of turbomachinery that guide pin like elements that are utilized on slanted or tapered turbine sections are positioned so as to be slanted both radially and axially with respect to the turbine axis, as evidenced by Imbourg et al. (7,234,920) and Crozet et al.

(7,070,387) (note pin elements "28" in both), so as to be perpendicular to the casing wall. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize slanted guide pins since such a modification is well known in the art when utilizing a tapered turbine section so that the guide pins are perpendicular to the casing wall.

Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch et al. (3,365,173), hereinafter "Lynch" as applied to claim 1 above, and further in view of Hartman (847,768). The modified invention of Lynch discloses the invention substantially as claimed except for the use of a mounting device. Hartman discloses a mounting device, i.e. bolt holder, that is formed by a plate-shaped base body (1,5,1) having two recesses, i.e. socket spaces housing the bolt heads, where the bolts reach therein and are then capable of being tightened from the opposite side by nuts.

Hartman also discloses a handle (4^a) extending approximately perpendicularly from the base body. The bolt head passes into the recesses perpendicularly to the plane of the base body to be tightened and are brought out of engagement therewith tangentially to the plane of the base body, i.e. pulled upward as shown in Fig. 2. The "bolt-retainer" of Hartman inherently facilitates the installation of bolts by a single operator. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was

Art Unit: 3745

made to modify the turbine of Lnych by utilizing the mounting device as taught by Hartman for the purpose of facilitating installation of the guide pin.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents issued to State, Holhut and Pridemore discloses state of the art bolt holders.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHANIEL WIEHE whose telephone number is (571)272-8648. The examiner can normally be reached on Mon.-Thur. and alternate Fri., 7am-4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571)272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3745

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NATHAN WIEHE/
Nathan Wiehe
Examiner
Art Unit 3745

/Edward K. Look/
Supervisory Patent Examiner, Art Unit 3745